



UNITED STATES PATENT AND TRADEMARK OFFICE

clw
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,212	10/12/2004	Timothy George Ryan	P69951US0	3475

136 7590 12/14/2007
JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

MCPHERSON, JOHN A

ART UNIT	PAPER NUMBER
----------	--------------

1795

MAIL DATE	DELIVERY MODE
-----------	---------------

12/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/501,212

Applicant(s)

RYAN ET AL.

Examiner

John A. McPherson

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/18/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 15-17, 19 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the spatially patterned *monograting-like* surface relief microstructure" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. This rejection could be overcome by replacing "monograting-like" with --periodic--.

Claim 11 recites the limitation "the required pattern" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the macroscopic spatial patterning" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the microscopic pattern" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 15, the phrase "or in the preferred embodiment" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 15 recites the limitation "the desired mould features" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1795

Regarding claim 16, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 17, the phrase "and in particular" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 19 is included in this rejection only because it depends from indefinite claim 17.

Claim 26 is indefinite because the identity of the alternative element with which the reflective layer is intended to be deposited is unclear (i.e. the text after "the" in the phrase "with the or a coating layer" is missing).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6-8, 11, 18, 19, 21, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 4-103637 (JP '637). JP '637 discloses a method of producing an oriented organic polymer film comprising the steps of forming a plurality of grooves with a depth of 0.5 microns at intervals of 1.0 microns in a baseplate by photoetching; applying a polymerization catalyst dissolved in a liquid crystal substance

Art Unit: 1795

onto the baseplate, wherein the liquid crystals are oriented by the grooves; bringing a monomer into contact with the catalyst; and polymerizing the monomer. See the abstracts.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 887 667 [reference AN of the Information Disclosure Statement filed 8/18/04] (EP '667) in view of US 6,335,775 to Iwamura et al. [reference AA of the Information Disclosure Statement filed 8/18/04] (Iwamura).

EP '667 discloses a method of making a patterned retarder comprising the steps of forming an alignment layer on a substrate; rubbing the alignment layer in a first direction; masking the alignment layer; rubbing the alignment layer in a different direction; removing the mask; forming a layer of birefringent material on the alignment layer, wherein the optical axis of the birefringent material adopts the alignment of the underlying alignment layer; and fixing the birefringent material. See the abstract. Additionally, the birefringent material may comprise a polymerizable liquid crystal material. See column 2, lines 26-40 and column 7, line 52 to column 8, line 42.

Art Unit: 1795

However, EP '667 does not disclose forming an alignment layer comprising a spatially patterned periodic surface relief microstructure.

Iwamura discloses a method providing a plurality of grooves and projections in an orientation control layer by copying the surface shape of a master which is cut to have the shape corresponding to the desired grooves and projections. The shape of the master is copied by a process comprising the step of radiating ultraviolet light onto an ultraviolet curable resin which is in contact with a stamper or a die. See the abstract; column 2, lines 7-12; column 9, lines 18-21; column 9, lines 51-56; column 13, lines 17-51; column 14, line 41 to column 16, line 50; column 17, lines 32-62 and Figures 11-18 and 21-27.


It would have been obvious to one skilled in the requisite art to provide grooves and projections in an orientation control layer by coping the surface shape of a master, as taught by Iwamura, in the process of EP '667 because it is taught that such a process avoids the problem of dust generated by the rubbing process, and furthermore provides an unevenness pattern for controlling orientation which can be designed with high precision.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. McPherson whose telephone number is (571) 272-1386. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

Art Unit: 1795

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John A. McPherson
Primary Examiner
Art Unit 1795

JAM
12/6/07